

PART 236

SYNTHETIC ORGANIC CHEMICAL MANUFACTURING FACILITY
COMPONENT LEAKS

(Statutory authority: Environmental Conservation Law, §§3-0301, 19-0301.1)

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Historical Note

Part (§§236.1-236.8) filed Dec. 13, 1991 eff. 30 days after filing.

§ 236.1 Definitions.

- (a) For the purpose of this Part, the general definitions of Part 200 of this Title apply.
- (b) For the purpose of this Part, the following definitions also apply:

(a) *CAS number.* Chemical Abstracts Service registration number assigned to specific chemicals, isomers, or mixtures of chemicals.

(2) *Component.* Any piece of process unit equipment which has the potential to leak a chemical listed in section 236.8, table 1, of this Part when monitored as prescribed by section 236.7 of this Part. These include, but are not limited to: pumps, compressors, valves, open-ended pipes, and pressure relief devices. Excluded from these are valves which are not externally operated.

(3) *Department.* The New York State Department of Environmental Conservation.

(4) *Double block-and-bleed system.* Two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

(5) *Initial attempt to repair.* To take rapid action to repair leaks. These include, but are not limited to: tightening or replacing bonnet bolts, tightening packing bolts or glands, or injecting lubricant into lubricated packing.

(6) *In gas/vapor service.* Any equipment which processes, transfers, or contains a chemical or mixture of chemicals in the gaseous phase having a concentration greater than 10 percent by weight of the chemicals listed in section 236.8, table 1, of this Part.

(7) *In heavy liquid service.* Any equipment which processes, transfers, or contains a fluid and is not in gas/vapor or light liquid service.

(8) *In light liquid service.* Any equipment which processes, transfers, or contains a fluid having a vapor pressure greater than 0.3 kilopascals at 20°C (0.0427 psia at 68°F) and having a concentration greater than 10 percent by weight of the chemicals listed in section 236.8, table 1, of this Part.

(9) *In vacuum service.* Equipment operating at an internal pressure at least 5 kilopascals (0.712 psia) below ambient pressure.

(10) *Leak.* The emission of a chemical listed in section 236.8, table 1, of this Part at a concentration greater than or equal to 10,000 parts per million by volume (ppmv) as shown by monitoring. An indication of liquids dripping shall also be considered a leak.

(11) *Liquids dripping.* Any visible leakage from a seal or opening including, but not limited to: dripping, spraying, misting, clouding, or ice formation.

(12) *Open-ended valve or line.* Any valve having one side of the valve seat in contact with the process fluid and one side open to the atmosphere either directly or through open piping. Pressure relief valves are an exception to this definition.

(13) *Process unit.* Components assembled to produce, as an intermediate or final product, one or more of the chemicals listed in section 236.8, table 1, of this Part.

(14) *Process unit shutdown.* A scheduled work practice or operational procedure that stops production from all or part of a process unit. Process unit shutdowns do not include unscheduled work practice or operational procedures that stop production from all or part of a process unit for less than 24 hours, or the use of spare equipment or a technically feasible bypass without stopping production.

(15) *Repair.* To adjust or otherwise alter a component to eliminate a leak.

(16) *Synthetic organic chemical manufacturing facility.* A facility which manufactures, as an intermediate or final product, one or more of the synthetic organic chemicals, polymers and resins listed in section 236.8, table 1, of this Part.

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

§ 236.2 Applicability.

(a) Any owner or operator of a synthetic organic chemical manufacturing facility where such chemicals were being produced prior to the effective date of this Part, must:

- (1) prepare a leak detection and repair plan in accordance with section 236.5 of this Part; and
- (2) be in compliance with the provisions of this Part within 180 days of the effective date of this Part.

(b) Any owner or operator of a synthetic organic chemical manufacturing facility where such chemicals are first manufactured on or after the effective date of this Part is required to demonstrate compliance with this Part upon start-up.

(c) Components subject to Federal regulations which require either an equal or more stringent leak detection and repair program (*i.e.*, equivalent or lower definition of leak and equivalent or more frequent monitoring requirements), or equal or more stringent equipment specifications, are deemed to be in compliance with the provisions of this Part contingent on the source owner or operator complying with such Federal regulations.

Note: The department is cognizant of pending National Emission Standards for Hazardous Air Pollutants which regulate process unit components to control fugitive emissions of volatile hazardous air pollutants. These standards would regulate many of the same components as Part 236. Where the Federal standards are adopted to be more stringent than those of Part 236, the department will accept compliance with the Federal standards in lieu of compliance with this Part, contingent on the adoption and implementation of the Federal standards.

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

§ 236.3 Control requirements.

(a) Any owner or operator of a synthetic organic chemical manufacturing facility must monitor each of the following process unit components for leaks, on a quarterly schedule:

- (1) each pump in light liquid service;
- (2) each compressor in gas/vapor service;
- (3) each pressure relief valve in gas/vapor service;
- (4) each valve in light liquid service; and

- (5) each valve in gas/vapor service.
- (b) Leaks detected in any of the monitored components must be repaired in accordance with the provisions set forth in section 236.4 of this Part.
- (c) Any owner or operator of a synthetic organic chemical manufacturing facility must also comply with the following component standards:
 - (1) Pumps in light liquid service must be visually inspected each calendar week for evidence of liquids dripping. Any leaks detected during visual inspection must be repaired in accordance with section 236.4 of this Part.
 - (2) Pressure relief devices in gas/vapor service must be monitored for leaks within five days of an over-pressure release. Any leaks detected during monitoring must be repaired in accordance with section 236.4 of this Part.
 - (3) Open-ended valves or lines in gas/vapor or light liquid service must be sealed with either a second valve, blind flange, cap, or plug. The sealing device may only be removed while a sample is being taken or during maintenance operations.
 - (i) When a second valve is used, each open-ended line or valve equipped with a second valve shall be operated in such a manner that the valve on the process fluid end is closed before the second valve is closed.
 - (ii) When a double block-and-bleed system is used, the bleed valve or line may remain open only during operations that require venting of the line between the block valves, but shall be closed at all other times.

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

§ 236.4 Repair requirements.

- (a) Any owner or operator of a synthetic organic chemical manufacturing facility shall repair leaking components in accordance with this section.
- (b) Once a leaking component is identified, any owner or operator subject to this Part must:
 - (1) affix a weatherproof and readily visible tag to the leaking component bearing an identification number and the date the leak was detected. This tag must not be removed until the component is repaired and passes reinspection;
 - (2) make an initial attempt to repair the leaking component within five days;
 - (3) repair the leaking component as soon as practicable, but not later than 15 calendar days after the leak is detected; and
 - (4) remonitor all leaking components within 48 hours after repairs have been completed.
- (c) Delay of repair of components as described in subdivision (b) of this section will be allowed by the department provided that an initial attempt to repair is made after which a decision is made by a duly authorized representative of the facility that replacement parts necessary to complete the repair are not available in time, or that repair of the leaking component is technically infeasible without a process unit shutdown. Repair of such a component must be completed during the next process unit shutdown and before subsequent start-up.
- (d) The department may require the rescheduling of a planned process unit shutdown to an earlier date based on the number and severity of tagged leaks awaiting repair at shutdown. Before requiring a rescheduled shutdown, the department shall consider the effect of the shutdown on production, the availability of needed repair equipment, and the time required for contracting outside labor and/or rescheduling facility personnel and shall so direct the source owner in writing to comply with the rescheduled shutdown. The source owner shall comply with the department's directive, or shall request that a directed rescheduling of a planned process unit shutdown be reconsidered according to the following procedure:
 - (1) A request for reconsideration must be filed in writing with the department within 20 days of the receipt of the department's directed rescheduling, and must be signed by a duly authorized representative of the facility.

(2) Such request must include a statement supporting the source owner's claims of misapplication of laws or regulations in the department's directive, and a statement specifying the relief sought by the source owner.

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

§ 236.5 Recordkeeping and reporting requirements.

The owner or operator of a synthetic organic chemical manufacturing facility subject to this Part must do the following:

(a) develop and conduct a leak detection and repair plan consistent with the provisions of this Part;

(b) within 180 days after the effective date of this Part, implement a leak detection and repair plan. The plan must contain as a minimum a list of process components subject to the provisions of this Part, a copy of the log book format, and the make and model of the monitoring equipment to be used;

(c) record the following information in an inspection log for each leaking component found:

- (1) name of process unit where the component is located;
- (2) tag identification number;
- (3) type of component;
- (4) date on which the leak was detected for the component;
- (5) date on which the component was repaired;
- (6) identification of those components which cannot be repaired until process unit shutdown, the reason repair must be delayed, and the signature of a duly authorized representative of the facility whose decision was that the leaking component could not be repaired without a process unit shutdown;
- (7) the date of each calibration of the monitoring instrument;
- (8) date and monitor instrument reading detected after the component is repaired; and
- (9) total number of components monitored and the total number of components found leaking;

(d) a copy of the inspection log must be retained at the plant for a minimum of two years after the date on which the report for the inspection period was prepared, and must be made available to the department upon request; and

(e) commencing 180 days after this Part becomes effective, submit quarterly reports to the department for the preceding quarterly monitoring period. These reports must be submitted within 15 days from the close of the quarter, and shall consist of:

- (1) number and type of leaking components located, but not repaired within 15 days;
- (2) number and type of leaking components awaiting process unit shutdown for repair;
- (3) number and type of components inspected;
- (4) number and type of components repaired;
- (5) elapsed time to repair each leaking component; and
- (6) a signed statement by a duly authorized representative of the facility attesting to the fact that, with the exception of those components listed in paragraphs 236.6 (e)(1) and (2) of this Part, all inspections and repairs were performed in accordance with the leak detection and repair plan.

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

§ 236.6 Exemptions.

(a) Any components not in gas/vapor or light liquid service are exempt from the provisions of this Part provided that the owner or operator keeps documentation at the facility proving which components are exempt.

(b) Any components in vacuum service are exempt from the provisions of this Part provided that the owner or operator keeps documentation at the facility proving which components are exempt.

(c) Any components in process units which produce chemicals listed in section 236.8, table 1, of this Part as byproducts which are not sold and are not used in another process as an intermediate product, are exempt.

(d) Any components in process units which produce chemicals listed in section 236.8, table 1, of this Part which are in gas/vapor or light liquid service fewer than 300 hours per year are exempt from the provisions of this Part provided that the owner or operator keeps documentation at the facility proving which components are exempt.

(e) The department will review and make determination on requests for waivers for the following:

(1) Components that are unsafe to monitor because of extreme temperatures, extreme pressures, location more than two meters (6.6 feet) above a permanent support structure, or for other reasons may be exempt from quarterly monitoring provided that the owner or operator requests a waiver from the department which includes a plan to monitor these components at least once per year.

(2) Components constructed to vent the emissions of chemicals regulated in this Part to an air cleaning installation may be exempt from quarterly monitoring provided that the owner or operator requests a waiver from the department which includes a plan to monitor these components at least once per year. The waiver application must also show that the air cleaning installation provides an overall capture and removal efficiency of at least 81 percent.

(3) An alternative method of compliance with the provisions of this Part may be acceptable if the owner or operator can demonstrate to the department that the methods utilized constitute reasonably available control technology.

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

§ 236.7 Monitoring.

Any person subject to this Part shall determine whether leaks of volatile organic compounds exist by using method 21 of appendix A of 40 CFR 60 (see table 1, section 200.9 of this Title).

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

* CAS numbers are Chemical Abstracts Service registration numbers assigned to specific chemicals, isomers, or mixtures of chemicals. Some isomers or mixtures that are covered by the standards do not have CAS numbers assigned to them. The requirements of this Part apply to all of the chemicals listed, whether CAS numbers have been assigned or not.

§ 236.8 Table 1.

CAS NUMBER AND CHEMICAL NAME OF SYNTHETIC ORGANIC CHEMICALS TO WHICH THIS PART APPLIES

CAS No. ^a	Chemical
105-57-7	Acetal
75-07-0	Acetaldehyde
107-89-1	Acetaldol
60-35-5	Acetamide
103-84-4	Acetanilide
64-19-7	Acetic Acid
108-24-7	Acetic anhydride
67-64-1	Acetone
75-86-5	Acetone cyanohydrin
75-05-8	Acetonitrile
98-86-2	Acetophenone
75-36-5	Acetyl chloride
74-86-2	Acetylene
107-02-8	Acrolein
79-06-1	Acrylamide
79-10-7	Acrylic acid
107-13-1	Acrylonitrile
124-04-9	Adipic acid
111-69-3	Adiponitrile
(^b)	Alkyl naphthalenes
107-18-6	Allyl alcohol
107-05-1	Allyl chloride
1321-11-5	Aminobenzoic acid
111-41-1	Aminoethylethanolamine
123-30-8	p-Aminophenol
628-63-7, 123-92-2	Amyl acetates
71-41-0 ^c	Amyl alcohols
110-58-7	Amyl amine
543-59-9	Amyl chloride
110-66-7 ^c	Amyl mercaptans
1322-06-1	Amyl phenol
62-53-3	Aniline
142-04-1	Aniline hydrochloride
29191-52-4	Anisidine
100-66-3	Anisole
118-92-3	Anthranilic acid
84-65-1	Anthraquinone
100-52-7	Benzaldehyde
55-21-0	Benzamide
71-43-2	Benzene
98-48-6	Benzenedisulfonic acid
98-11-3	Benzenesulfonic acid
134-81-6	Benzil
76-93-7	Benzilic acid
65-85-0	Benzoic acid
119-53-9	Benzoin

^a No CAS number(s) have been assigned to this chemical, its isomers, or mixtures containing these chemicals.

^c CAS numbers for some of the isomers are listed, the standards apply to all of the isomers and mixtures, even if CAS numbers have not been assigned.

CAS No. ^a	Chemical
100-47-0	Benzonitrile
119-61-9	Benzophenone
98-07-7	Benzotrichloride
98-88-4	Benzoyl chloride
100-51-6	Benzyl alcohol
100-46-9	Benzylamine
120-51-4	Benzyl benzoate
100-44-7	Benzyl chloride
98-87-3	Benzyl dichloride
92-52-4	Biphenyl
80-05-7	Bisphenol A
10-86-1	Bromobenzene
27497-51-4	Bromonaphthalene
106-99-0	Butadiene
106-98-9	1-butene
123-86-4	n-butyl acetate
141-32-2	n-butyl acrylate
71-36-3	n-butyl alcohol
78-92-2	s-butyl alcohol
75-65-0	t-butyl alcohol
109-73-9	n-butylamine
13952-84-6	s-butylamine
75-64-9	t-butylamine
98-73-7	p-tert-butyl benzoic acid
107-88-0	1,3-butylene glycol
123-72-8	n-butyraldehyde
107-92-6	Butyric acid
106-31-0	Butyric anhydride
109-74-0	Butyronitrile
105-60-2	Caprolactam
75-1-50	Carbon disulfide
558-13-4	Carbon tetrabromide
56-23-5	Carbon tetrachloride
9004-35-7	Cellulose acetate
79-11-8	Chloroacetic acid
108-42-9	m-chloroaniline
95-51-2	o-chloroaniline
106-47-8	p-chloroaniline
35913-09-8	Chlorobenzaldehyde
108-90-7	Chlorobenzene
118-91-2, 535-80-8, 744-11-3 ^c	Chlorobenzoic acid
2136-81-4, 2136-89-2, 5216-25-1 ^c	Chlorobenzotrichloride
1321-03-5	Chlorobenzoyl chloride
25497-29-4	Chlorodifluoromethane
75-45-6	Chlorodifluoroethane
67-66-3	Chloroform
25586-43-0	Chloronaphthalene
88-73-3	o-chloronitrobenzene
100-00-5	p-chloronitrobenzene
25167-80-0	Chlorophenols
126-99-8	Chloroprene

^aCAS numbers for some of the isomers are listed, the standards apply to all of the isomers and mixtures, even if CAS numbers have not been assigned.

CAS No.*	Chemical
7790-94-5	Chlorosulfonic acid
108-41-8	m-chlorotoluene
95-49-8	o-chlorotoluene
106-43-4	p-chlorotoluene
75-72-9	Chlorotrifluoromethane
108-39-4	m-cresol
95-48-7	o-cresol
106-44-5	p-cresol
1319-77-3	Mixed cresols
1319-77-3	Cresylic acid
4170-30-0	Crotonaldehyde
3724-65-0	Crotonic acid
98-82-8	Cumene
80-15-9	Cumene hydroperoxide
372-09-8	Cyanoacetic acid
506-77-4	Cyanogen chloride
108-80-5	Cyanuric acid
108-77-0	Cyanuric chloride
110-82-7	Cyclohexane
108-93-0	Cyclohexanol
108-94-1	Cyclohexanone
110-83-8	Cyclohexene
108-91-8	Cyclohexylamine
111-78-4	Cyclooctadiene
112-30-1	Decanol
123-42-2	Diacetone alcohol
27576-04-1	Diaminobenzoic acid
95-76-1, 95-82-9, 554-00-7, 8-27-5, 608-31-1, 626-43-7, 27134-27-6, 57311-92-9 ^c	Dichloroaniline
541-73-1	m-dichlorobenzene
95-50-1	o-dichlorobenzene
106-46-7	p-dichlorobenzene
75-71-8	Dichlorodifluoromethane
111-44-4	Dichloroethyl ether
107-06-2	1,2-dichloroethane (EDC)
96-23-1	Dichlorohydrin
26952-23-8	Dichloropropene
101-83-7	Dicyclohexylamine
109-89-7	Diethylamine
111-46-6	Diethylene glycol
112-36-7	Diethylene glycol diethyl ether
111-96-6	Diethylene glycol dimethyl ether
112-34-5	Diethylene glycol monobutyl ether
124-17-7	Diethylene glycol monobutyl ether acetate
111-90-0	Diethylene glycol monoethyl ether
112-15-2	Diethylene glycol monoethyl ether acetate
111-77-3	Diethylene glycol monomethyl ether
64-67-5	Diethyl sulfate
75-37-6	Diffluoroethane
25167-70-8	Diisobutylene

*CAS numbers for some of the isomers are listed, the standards apply to all of the isomers and mixtures, even if CAS numbers have not been assigned.

CAS No. ^a	Chemical
26761-40-0	Diisodecyl phthalate
27554-26-3	Diisooctyl phthalate
674-82-8	Diketene
124-40-3	Dimethylamine
121-69-7	N,N-dimethylaniline
115-10-6	N,N-dimethyl ether
68-12-2	N,N-dimethylformamide
57-14-7	Dimethylhydrazine
77-78-1	Dimethyl sulfate
75-18-3	Dimethyl sulfide
67-68-5	Dimethyl sulfoxide
120-61-6	Dimethyl terephthalate
99-34-3	3,5-dinitrobenzoic acid
51-28-5	Dinitrophenol
25321-14-6	Dinitrotoluene
123-91-1	Dioxane
646-06-0	Dioxilane
122-39-4	Diphenylamine
101-84-8	Diphenyl oxide
102-08-9	Diphenyl thiourea
25265-71-8	Dipropylene glycol
25378-22-7	Dodecene
28675-17-4	Dodecylaniline
27193-86-8	Dodecylphenol
106-89-8	Epichlorohydrin
64-17-5	Ethanol
141-43-5 ^c	Ethanolamines
141-78-6	Ethyl acetate
141-97-9	Ethyl acetoacetate
140-88-5	Ethyl acrylate
75-04-7	Ethylamine
100-41-4	Ethylbenzene
74-96-4	Ethyl bromide
9004-57-3	Ethylcellulose
75-00-3	Ethyl chloride
105-39-5	Ethyl chloroacetate
105-56-6	Ethylcyanoacetate
74-85-1	Ethylene
96-49-1	Ethylene carbonate
107-07-3	Ethylene chlorohydrin
107-15-3	Ethylenediamine
106-93-4	Ethylene dibromide
107-21-1	Ethylene glycol
111-55-7	Ethylene glycol diacetate
110-71-4	Ethylene glycol dimethyl ether
111-76-2	Ethylene glycol monobutyl ether
112-07-2	Ethylene glycol monobutyl ether acetate
110-80-5	Ethylene glycol monoethyl ether
111-15-9	Ethylene glycol monoethyl ether acetate
109-86-4	Ethylene glycol monomethyl ether
110-49-6	Ethylene glycol monomethyl ether acetate

^aCAS numbers for some of the isomers are listed, the standards apply to all of the isomers and mixtures, even if CAS numbers have not been assigned.

<i>CAS No.^a</i>	<i>Chemical</i>
122-99-6	Ethylene glycol monophenyl ether
2807-30-9	Ethylene glycol monopropyl ether
75-21-8	Ethylene oxide
60-29-7	Ethyl ether
104-76-7	2-ethylhexanol
122-51-0	Ethyl orthoformate
95-92-1	Ethyl oxalate
41892-71-1	Ethyl sodium oxalacetate
50-00-0	Formaldehyde
75-12-7	Formamide
64-18-6	Formic Acid
110-17-8	Fumaric acid
98-01-1	Furfural
56-81-5	Glycerol
26545-73-7	Glycerol dichlorohydrin
25791-96-2	Glycerol triether
56-40-6	Glycine
107-22-2	Glyoxal
118-74-1	Hexachlorobenzene
67-72-1	Hexachloroethane
36653-82-4	Hexadecyl alcohol
124-09-4	Hexamethylenediamine
629-11-8	Hexamethylene glycol
100-97-0	Hexamethylenetetramine
74-90-8	Hydrogen cyanide
123-31-9	Hydroquinone
99-96-7	p-hydroxybenzoic acid
26760-64-5	Isoamylene
78-83-1	Isobutanol
110-19-0	Isobutyl acetate
115-11-7	Isobutylene
78-84-2	Isobutyraldehyde
79-31-2	Isobutyric acid
25339-17-7	Isodecanol
26952-21-6	Isooctyl alcohol
78-78-4	Isopentane
78-59-1	Isophorone
121-91-5	Isophthalic acid
78-79-5	Isoprene
67-63-0	Isopropanol
108-21-4	Isopropyl acetate
75-31-0	Isopropylamine
75-29-6	Isopropyl chloride
25168-06-3	Isopropylphenol
463-51-4	Ketene
(b)	Linear alkyl sulfonate
123-01-3	Linear alkylbenzene (linear dodecylbenzene)
110-16-7	Maleic acid
108-31-6	Maleic anhydride
6915-15-7	Malic acid
141-79-7	Mesityl oxide
121-47-1	Metanilic acid

^aNo CAS number(s) have been assigned to this chemical, its isomers, or mixtures containing these chemicals.

CAS No. ^a	Chemical
79-41-4	Methacrylic acid
563-47-3	Methallyl chloride
67-56-1	Methanol
79-20-9	Methyl acetate
105-45-3	Methyl acetoacetate
74-89-5	Methylamine
100-61-8	n-methylaniline
74-83-9	Methyl bromide
37365-71-2	Methyl butynol
74-87-3	Methyl chloride
108-87-2	Methylcyclohexane
1331-22-2	Methylcyclohexanone
75-09-2	Methylene chloride
101-77-9	Methylene dianiline
101-68-8	Methylene diphenyl diisocyanate
78-93-3	Methyl ethyl ketone
107-31-3	Methyl formate
108-11-2	Methyl isobutyl carbinol
108-10-1	Methyl isobutyl ketone
80-62-6	Methyl methacrylate
77-75-8	Methylpentynol
98-83-9	a-methylstyrene
1634-04-4	Methyl tert-butyl ether
110-91-8	Morpholine
85-47-2	a-naphthalene sulfonic acid
120-18-3	b-naphthalene sulfonic acid
90-15-3	a-naphthol
135-19-3	b-naphthol
75-98-9	Neopentanoic acid
88-74-4	o-nitroaniline
100-01-6	p-nitroaniline
91-23-6	o-nitroanisole
100-17-4	p-nitroanisole
98-95-3	Nitrobenzene
27178-83-2 ^c	Nitrobenzoic acid (o,m, and p)
79-24-3	Nitroethane
75-52-5	Nitromethane
88-75-5	2-Nitrophenol
25322-01-4	Nitropropane
1321-12-6	Nitrotoluene
27215-95-8	Nonene
25154-52-3	Nonylphenol
27193-28-8	Octylphenol
123-63-7	Paraldehyde
115-77-5	Pentaerythritol
109-66-0	n-pentane
109-67-1	1-pentene
127-18-4	Perchloroethylene
594-42-3	Perchloromethyl mercaptan
94-70-2	o-phenetidine
156-43-4	p-phenetidine

^aCAS numbers for some of the isomers are listed, the standards apply to all of the isomers and mixtures, even if CAS numbers have not been assigned.

<i>CAS No.*</i>	<i>Chemical</i>
108-95-2	Phenol
98-67-9, 585-38-6, 609-46-1, 1333-39-7 ^c	phenolsulfonic acids
91-40-7	Phenyl anthranilic acid
106-50-3	Phenylenediamine
75-44-5	Phosgene
85-44-9	Phthalic anhydride
85-41-6	Phthalimide
108-99-6	b-picoline
110-85-0	Piperazine
9003-29-6, 25036-29-7 ^c	Polybutenes
9002-88-4	Polyethylene
25322-68-3	Polyethylene glycol
9003-07-0	Polypropylene
25322-69-4	Polypropylene glycol
9003-53-6	Polystyrene
123-38-6	Propionaldehyde
79-09-4	Propionic acid
71-23-8	n-propyl alcohol
107-10-8	Propylamine
540-54-5	Propyl chloride
115-07-1	Propylene
127-00-4	Propylene chlorohydrin
78-87-5	Propylene dichloride
57-55-6	Propylene glycol
75-56-9	Propylene oxide
110-86-1	Pyridine
106-51-4	Quinone
108-46-3	Resorcinol
27138-57-4	Resorcylic acid
69-72-7	Salicylic acid
127-09-3	Sodium acetate
532-32-1	Sodium benzoate
9004-32-4	Sodium carboxymethyl cellulose
3926-62-3	Sodium chloroacetate
141-53-7	Sodium formate
139-02-6	Sodium phenate
110-44-1	Sorbic acid
100-42-5	Styrene
110-15-6	Succinic acid
110-61-2	Succinonitrile
121-57-3	Sulfanilic acid
126-33-0	Sulfolane
1401-55-4	Tannic acid
100-21-0	Terephthalic acid
79-34-5 ^c	Tetrachloroethanes
117-08-8	Tetrachlorophthalic anhydride
78-00-2	Tetraethyl lead

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CAS No. ^a	Chemical
119-64-2	Tetrahydronaphthalene
85-43-8	Tetrahydrophthalic anhydride
75-74-1	Tetramethyl lead
110-60-1	Tetramethylenediamine
110-18-9	Tetramethylethylenediamine
108-88-3	Toluene
95-80-7	Toluene-2,4-diamine
584-84-9	Toluene-2,4-diisocyanate
26471-62-5	Toluene diisocyanates (mixture)
1333-07-9	Toluenesulfonamide
104-15-4 ^c	Toluenesulfonic acids
98-59-9	Toluenesulfonyl chloride
26915-12-8	Toluidines
87-61-6, 108-70-3, 120-82-1 ^c	Trichlorobenzenes
71-55-6	1,1,1-trichloroethane
79-00-5	1,1,2-trichloroethane
79-01-6	Trichloroethylene
75-69-4	Trichlorofluoromethane
96-18-4	1,2,3-trichloropropane
76-13-1	1,1,2-trichloro-1,2,2-trifluoro-ethane
121-44-8	Triethylamine
112-27-6	Triethylene glycol
112-49-2	Triethylene glycol dimethyl ether
7756-94-7	Triisobutylene
75-50-3	Trimethylamine
57-13-6	Urea
108-05-4	Vinyl acetate
75-01-4	Vinyl chloride
75-35-4	Vinylidene chloride
25013-15-4	Vinyl toluene
1330-20-7	Xylenes (mixed)
95-47-6	o-xylene
106-42-3	p-xylene
1300-71-6	Xylenol
1300-73-8	Xylidine

Historical Note

Sec. filed Dec. 13, 1991 eff. 30 days after filing.

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